

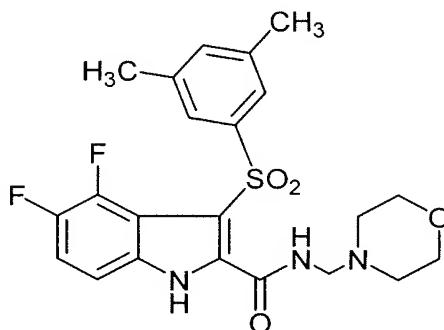
AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

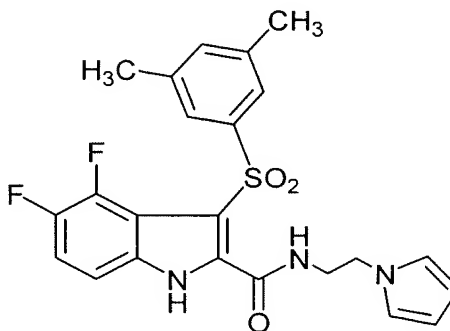
Claims 1-7 (cancelled)

Claim 8 (withdrawn): A compound of the formula



or a pharmaceutically acceptable salt thereof.

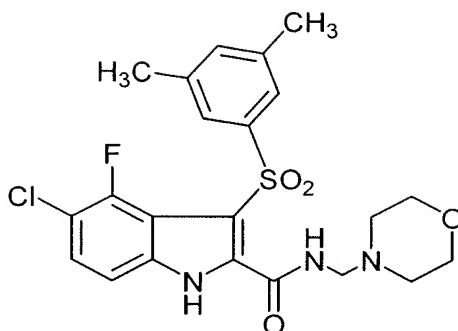
Claim 9 (withdrawn): A compound of the formula



or a pharmaceutically acceptable salt thereof.

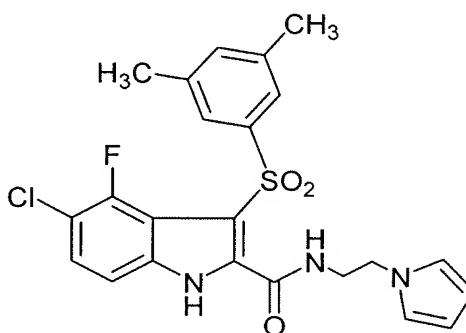
Claims 10-11 (cancelled)

Claim 12 (withdrawn): A compound of the formula



or a pharmaceutically acceptable salt thereof.

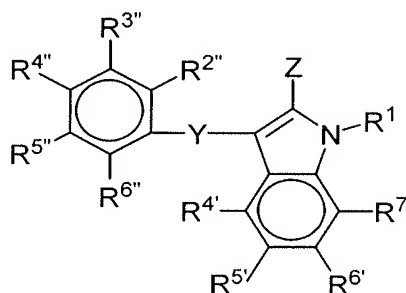
Claim 13 (withdrawn): A compound of the formula



or a pharmaceutically acceptable salt thereof.

Claims 14-18 (cancelled)

Claim 19 (previously presented): A method for the treatment of an HIV-infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein

R^1 is hydrogen; acyl; $-C(=O)H$; $-C(=W)H$; $-C(=O)R^2$; $-C(=W)R^2$; $-C(=O)OH$; $-C(=W)OH$; $-C(=O)OR^2$; $-C(=W)OR^2$; $-C(=O)SH$; $-C(=W)SH$; $-C(=O)SR^2$; $-C(=W)SR^2$;

-C(=O)NH₂; -C(=W)NH₂; -C(=O)NHR²; -C(=W)NHR²; -C(=O)NR²R³; -C(=W)NR²R³;
-C(=W)NH-(CH₂)_p-(amino acid); or -(CH₂)_p-(amino acid);

R^{4'}, R^{5'}, R^{6'}, R^{7'}, R^{2''}, R^{3''}, R^{4''}, R^{5''} and R^{6''} are each independently H; halo; -NO₂;
-CN; -OH; -OR²; -SH; -SR²; -NH₂; -NHR²; -NR²R³; -NHSO₂-C₁₋₃alkyl; -NR²SO₂-C₁₋₃alkyl;
-NHCO-C₁₋₃alkyl; -NR²CO-C₁₋₃alkyl; optionally substituted or unsubstituted branched or
unbranched alkyl, alkenyl or alkynyl; CH₃; CF₃; vinyl bromide; -CR²R²-S(O)_n-R³;
-CR²R²NH₂; -CR²R²NHR²; -CR²R²NR²R³; -CR²R²-C(=O)R²; alkacyl; optionally substituted
or unsubstituted acyl; -C(=O)H; -C(=W)H; -C(=O)R²; -C(=W)R²; -C(=O)OH; -C(=W)OH;
-C(=O)OR²; -C(=W)OR²; -C(=O)-SH; -C(=W)SH; -C(=O)SR²; -C(=W)SR²; -C(=O)NH₂;
-C(=W)NH₂; -C(=O)NHR²; -C(=W)NHR²; -C(=O)NR²R³; -C(=W)-NR²R³;
-C(=W)NH(CH₂)_p-(amino acid); an amino acid; or -(CH₂)_p(amino acid);

wherein at least two of R^{4'}, R^{5'}, R^{6'}, R^{7'} are not hydrogen;

Z is optionally substituted or unsubstituted acyl, -C(=O)NH₂; -C(=W)-NH₂;
-C(=O)NHR²; -C(=W)NHR²; -C(=O)NR²R³; -C(=W)NR²R³; -C(=W)NH(CH₂)_p-(amino
acid); an amino acid; -(CH₂)_p-(amino acid); -C(=O)R³; -C(=O)H; -C(=W)H; -C(=O)R²;
-C(=W)R²; -C(=O)OR³; -C(=O)OH; -C(=W)OH; -C(=O)OR²; -C(=W)-OR²; -C(=O)-SH;
-C(=W)SH; -C(=O)SR²; -C(=W)SR²; optionally substituted or unsubstituted branched or
unbranched alkyl, alkenyl or alkynyl; CH₃; CF₃; vinyl bromide; -CR²R²-S(O)_n-R³;
-CR²R²NH₂; -CR²R²NHR²; -CR²R²NR²R³; -CR²R²-C(=O)R²; -CN; or halo;

Y is S(O)₂;

each W is independently O; S; NH; NR²; -NR²R²; -N-CN; -N-NH₂; -N-NHR²;
-N-NR²R³; -N-OH; or -N-OR²;

each R² is independently hydrogen; an optionally substituted or unsubstituted
branched or unbranched lower alkyl, alkenyl or alkynyl; CH₃; CF₃; or vinyl bromide;

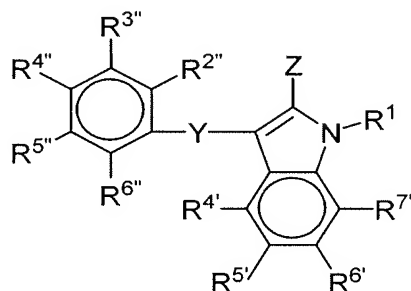
each R³ is independently hydrogen; optionally substituted or unsubstituted branched
or unbranched alkyl, alkenyl or alkynyl; CH₃; CF₃; vinyl bromide; -CR²R²-S(O)_n-R²;
-CR²R²NH₂; -CR²R²NHR²; -CR²R²NR²R²; -CR²R²-C(=O)R²; optionally substituted or
unsubstituted aryl; optionally substituted or unsubstituted heterocycle; optionally substituted
or unsubstituted alkylaryl; optionally substituted or unsubstituted alkylheterocycle; optionally
substituted or unsubstituted aralkyl; or optionally substituted or unsubstituted
heterocycle-alkyl;

each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

wherein the optionally substituted branched or unbranched alkyl, alkenyl, alkynyl, lower alkyl, lower alkenyl; lower alkynyl; acyl; aryl; heterocycle; alkaryl; alkheterocycle; arylalkyl; or alkylheterocycle optionally is substituted with one or more of halogen; -OH; -OR²; -SH; -SR²; oxime; hydrazine; -C(=O)H; -C(=W)H; -C(=O)R²; -C(=W)R²; -C(=O)OH; -C(=W)OH; -C(=O)OR²; -C(=W)OR²; -C(=O)SH; -C(=W)SH; -C(=O)SR²; -C(=W)SR²; -C(=O)NH₂; -C(=W)NH₂; -C(=O)-NHR²; -C(=W)-NHR²; -C(=O)NR²R³; -C(=W)-NR²R³; -NH₂; -NHR²; -NR²R³; -NHSO₂-C₁₋₃alkyl; -NR²SO₂-C₁₋₃alkyl; -NHCO-C₁₋₃alkyl; -NR²CO-C₁₋₃alkyl; -S(O)_n-R³; C₁₋₃ alkoxy; C₁₋₃thioether; or an amino acid residue; optionally in a pharmaceutically acceptable carrier or diluent.

Claim 20 (previously presented): A method for the treatment of an HIV-infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein

R¹ is hydrogen; acyl; -C(=O)H; -C(=W)H; -C(=O)R²; -C(=W)R²; -C(=O)OH; -C(=W)OH; -C(=O)OR²; -C(=W)OR²; -C(=O)SH; -C(=W)SH; -C(=O)SR²; -C(=W)SR²; -C(=O)NH₂; -C(=W)NH₂; -C(=O)NHR²; -C(=W)NHR²; -C(=O)NR²R³; -C(=W)NR²R³; -C(=W)NH-(CH₂)_p-(amino acid); or -(CH₂)_p-(amino acid);

R^{4'}, R^{5'}, R^{6'}, R^{7'}, R^{2''}, R^{3''}, R^{4''}, R^{5''} and R^{6''} are each independently H; halo; -NO₂; -CN; -OH; -OR²; -SH; -SR²; -NH₂; -NHR²; -NR²R³; -NHSO₂-C₁₋₃alkyl; -NR²SO₂-C₁₋₃alkyl; -NHCO-C₁₋₃alkyl; -NR²CO-C₁₋₃alkyl; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl; CH₃; CF₃; vinyl bromide; -CR²R²-S(O)_n-R³; -CR²R²NH₂; -CR²R²NHR²; -CR²R²NR²R³; -CR²R²-C(=O)R²; alkacyl; optionally substituted or unsubstituted acyl; -C(=O)H; -C(=W)H; -C(=O)R²; -C(=W)R²; -C(=O)OH; -C(=W)OH; -C(=O)OR²; -C(=W)OR²; -C(=O)-SH; -C(=W)SH; -C(=O)SR²; -C(=W)SR²; -C(=O)NH₂; -C(=W)NH₂; -C(=O)NHR²; -C(=W)NHR²; -C(=O)NR²R³; -C(=W)-NR²R³; -C(=W)NH(CH₂)_p-(amino acid); an amino acid; or -(CH₂)_p(amino acid);

wherein at least two of R^{4'}, R^{5'}, R^{6'}, R^{7'} are not hydrogen;

Z is optionally substituted or unsubstituted acyl, $-C(=O)NH_2$; $-C(=W)-NH_2$; $-C(=O)NHR^2$; $-C(=W)NHR^2$; $-C(=O)NR^2R^3$; $-C(=W)NR^2R^3$; $-C(=W)NH(CH_2)_p$ -(amino acid); an amino acid; $-(CH_2)_p$ -(amino acid); $-C(=O)R^3$; $-C(=O)H$; $-C(=W)H$; $-C(=O)R^2$; $-C(=W)R^2$; $-C(=O)OR^3$; $-C(=O)OH$; $-C(=W)OH$; $-C(=O)OR^2$; $-C(=W)-OR^2$; $-C(=O)-SH$; $-C(=W)SH$; $-C(=O)SR^2$; $-C(=W)SR^2$; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl; CH_3 ; CF_3 ; vinyl bromide; $-CR^2R^2-S(O)_n-R^3$; $-CR^2R^2NH_2$; $-CR^2R^2NHR^2$; $CR^2R^2NR^2R^3$; $-CR^2R^2-C(=O)R^2$; $-CN$; or halo;

Y is $S(O)_2$;

each W is independently O; S; NH; NR^2 ; $-NR^2R^2$; $-N-CN$; $-N-NH_2$; $-N-NHR^2$; $-N-NR^2R^3$; $-N-OH$; or $-N-OR^2$;

each R^2 is independently hydrogen; an optionally substituted or unsubstituted branched or unbranched lower alkyl, alkenyl or alkynyl; CH_3 ; CF_3 ; or vinyl bromide;

each R^3 is independently hydrogen; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl; CH_3 ; CF_3 ; vinyl bromide; $-CR^2R^2-S(O)_n-R^2$; $-CR^2R^2NH_2$; $-CR^2R^2NHR^2$; $-CR^2R^2NR^2R^2$; $-CR^2R^2-C(=O)R^2$; optionally substituted or unsubstituted aryl; optionally substituted or unsubstituted heterocycle; optionally substituted or unsubstituted alkylaryl; optionally substituted or unsubstituted alkylheterocycle; optionally substituted or unsubstituted aralkyl; or optionally substituted or unsubstituted heterocycle-alkyl;

each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

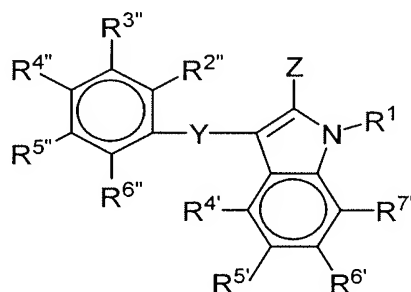
wherein the optionally substituted branched or unbranched alkyl, alkenyl, alkynyl, lower alkyl, lower alkenyl; lower alkynyl; acyl; aryl; heterocycle; alkaryl; alkylheterocycle; arylalkyl; or alkylheterocycle optionally is substituted with one or more of halogen; $-OH$; $-OR^2$; $-SH$; $-SR^2$; oxime; hydrazine; $-C(=O)H$; $-C(=W)H$; $-C(=O)R^2$; $-C(=W)R^2$; $-C(=O)OH$; $-C(=W)OH$; $-C(=O)OR^2$; $-C(=W)OR^2$; $-C(=O)SH$; $-C(=W)SH$; $-C(=O)SR^2$; $-C(=W)SR^2$; $-C(=O)NH_2$; $-C(=W)NH_2$; $-C(=O)-NHR^2$; $-C(=W)NHR^2$; $-C(=O)NR^2R^3$; $-C(=W)-NR^2R^3$; $-NH_2$; $-NHR^2$; $-NR^2R^3$; $-NHSO_2-C_{1-3}alkyl$; $-NR^2SO_2-C_{1-3}alkyl$; $-NHCO-C_3alkyl$; $-NR^2CO-C_{1-3}alkyl$; $-S(O)_n-R^3$; $C_{1-3}alkoxy$; $C_{1-3}thioether$; or an amino acid residue;

in combination and/or alternation with one or more other anti-HIV agent, optionally in a pharmaceutically acceptable carrier or diluent.

Claim 21 (original): The method of claim 20, wherein the other anti-HIV agent is a reverse transcriptase inhibitor.

Claim 22 (original): The method of claim 21, wherein the reverse transcriptase inhibitor induces a mutation lysine 103 → asparagine and/or tyrosine 181 → cysteine in HIV reverse transcriptase.

Claim 23 (previously presented): A method for the treatment of an HIV-infection in a host, wherein the HIV has a mutation at lysine 103 → asparagine and/or tyrosine 181 → cysteine in HIV reverse transcriptase, comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein

R¹ is hydrogen; acyl; -C(=O)H; -C(=W)H; -C(=O)R²; -C(=W)R²; -C(=O)OH; C(=W)OH; -C(=O)OR²; -C(=W)OR²; -C(=O)SH; -C(=W)SH; -C(=O)SR²; -C(=W)SR²; -C(=O)NH₂; -C(=W)NH₂; -C(=O)NHR²; -C(=W)NHR²; -C(=O)NR²R³; -C(=W)NR²R³; -C(=W)NH-(CH₂)_p-(amino acid); or -(CH₂)_p-(amino acid);

R^{4'}, R^{5'}, R^{6'}, R^{7'}, R^{2''}, R^{3''}, R^{4''}, R^{5''} and R^{6''} are each independently H; halo; -NO₂; -CN; -OH; -OR²; -SH; -SR²; -NH₂; -NHR²; -NR²R³; -NHSO₂C₁₋₃alkyl; -NR²SO₂-C₁₋₃alkyl; -NHCO-C₁₋₃alkyl; -NR²CO-C₁₋₃alkyl; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl; CH₃; CF₃; vinyl bromide; -CR²R²-S(O)_n-R³; -CR²R²NH₂; -CR²R²NHR²; -CR²R²NR²R³; -CR²R²-C(=O)R²; alkacyl; optionally substituted or unsubstituted acyl; -C(=O)H; -C(=W)H; -C(=O)R²; -C(=W)R²; -C(=O)OH; -C(=W)OH; -C(=O)OR²; -C(=W)OR²; -C(=O)-SH; -C(=W)SH; -C(=O)SR²; -C(=W)SR²; -C(=O)NH₂; -C(=W)NH₂; -C(=O)NHR²; -C(=W)NHR²; -C(=O)NR²R³; -C(=W)-NR²R³; -C(=W)NH(CH₂)_p-(amino acid); an amino acid; or -(CH₂)_p(amino acid);

wherein at least two of R^{4'}, R^{5'}, R^{6'}, R^{7'} are not hydrogen;

Z is optionally substituted or unsubstituted acyl, -C(=O)NH₂; -C(=W)-NH₂; -C(=O)NHR²; -C(=W)NHR²; -C(=O)NR²R³; -C(=W)NR²R³; -C(=W)NH(CH₂)_p-(amino acid); an amino acid; -(CH₂)_p-(amino acid); -C(=O)R³; -C(=O)H; -C(=W)H; -C(=O)R²; -C(=W)R²; -C(=O)OR³; -C(=O)OH; -C(=W)OH; -C(=O)OR²; -C(=W)-OR²; -C(=O)-SH; -C(=W)SH; -C(=O)SR²; -C(=W)SR²; optionally substituted or unsubstituted branched or

unbranched alkyl, alkenyl or alkynyl; CH₃; CF₃; vinyl bromide; -CR²R²-S(O)_n-R³;
-CR²R²NH₂; -CR²R²NHR²; -CR²R²NR²R³; -CR²R²-C(=O)R²; -CN; or halo;

Y is S(O)₂;

each W is independently O; S; -NH₂; -NHR²; -NR²R²; -N-CN; -N-NH₂; -N-NHR²;
-N-NR²R³; -N-OH; or -N-OR²;

each R² is independently hydrogen; an optionally substituted or unsubstituted
branched or unbranched lower alkyl, alkenyl or alkynyl; CH₃; CF₃; or vinyl bromide;

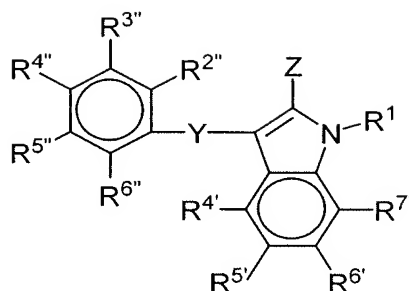
each R³ is independently hydrogen; optionally substituted or unsubstituted branched
or unbranched alkyl, alkenyl or alkynyl; CH₃; CF₃; vinyl bromide; -CR²R²-S(O)_n-R²;
-CR²R²NH₂; -CR²R²NHR²; -CR²R²NR²R²; -CR²R²-C(=O)R²; optionally substituted or
unsubstituted aryl; optionally substituted or unsubstituted heterocycle; optionally substituted
or unsubstituted alkylaryl; optionally substituted or unsubstituted alkylheterocycle;
optionally substituted or unsubstituted aralkyl; or optionally substituted or unsubstituted
heterocycle-alkyl;

each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

wherein the optionally substituted branched or unbranched alkyl, alkenyl, alkynyl,
lower alkyl, lower alkenyl; lower alkynyl; acyl; aryl; heterocycle; alkaryl; alkylheterocycle;
arylalkyl; or alkylheterocycle optionally is substituted with one or more of halogen; -OH;
-OR²; -SH; -SR²; oxime; hydrazine; -C(=O)H; -C(=W)H; -C(=O)R²; -C(=W)R²; -C(=O)OH;
-C(=W)OH; -C(=O)OR²; -C(=W)OR²; -C(=O)SH; -C(=W)SH; -C(=O)SR²; -C(=W)SR²;
-C(=O)NH₂; -C(=W)NH₂; -C(=O)-NHR²; -C(=W)NHR²; -C(=O)NR²R³; -C(=W)-NR²R³;
-NH₂; -NHR²; -NR²R³ -NHSO₂-C₁₋₃alkyl; -NR²SO₂-C₁₋₃alkyl; -NHCO-C₁₋₃alkyl;
-NR²CO-C₁₋₃alkyl -S(O)_n-R³; C₁₋₃ alkoxy; C₁₋₃thioether; or an amino acid residue;
optionally in a pharmaceutically acceptable carrier or diluent.

Claim 24 (previously presented): A method for the treatment of an HIV-infection in a host,
wherein the HIV is resistant to one or more reverse transcriptase inhibitors, comprising
administering to said host an effective anti-HIV treatment amount of a compound of formula
(I):



or a pharmaceutically acceptable salt thereof, wherein

R^1 is hydrogen; acyl; $-C(=O)H$; $-C(=W)H$; $-C(=O)R^2$; $-C(=W)R^2$; $-C(=O)OH$; $-C(=W)OH$; $-C(=O)OR^2$; $-C(=W)OR^2$; $-C(=O)SH$; $-C(=W)SH$; $-C(=O)SR^2$; $-C(=W)SR^2$; $-C(=O)NH_2$; $-C(=W)NH_2$; $-C(=O)NHR^2$; $-C(=W)NHR^2$; $-C(=O)NR^2R^3$; $-C(=W)NR^2R^3$; $-C(=W)NH-(CH_2)_p$ -(amino acid); or $-(CH_2)_p$ -(amino acid);

R^4 , R^5 , R^6 , R^7 , R^2 , R^3 , R^4 , R^5 and R^6 are each independently H; halo; $-NO_2$; $-CN$; $-OH$; $-OR^2$; $-SH$; $-SR^2$; $-NH_2$; $-NHR^2$; $-NR^2R^3$; $-NHSO_2-C_{1-3}alkyl$; $-NR^2SO_2-C_{1-3}alkyl$; $-NHCO-C_{1-3}alkyl$; $-NR^2CO-C_{1-3}alkyl$; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl; CH_3 ; CF_3 ; vinyl bromide; $-CR^2R^2-S(O)_n-R^3$; $-CR^2R^2NH_2$; $-CR^2R^2NHR^2$; $-CR^2R^2NR^2R^3$; $-CR^2R^2-C(=O)R^2$; alkacyl; optionally substituted or unsubstituted acyl; $-C(=O)H$; $-C(=W)H$; $-C(=O)R^2$; $-C(=W)R^2$; $-C(=O)OH$; $-C(=W)OH$; $-C(=O)OR^2$; $-C(=W)OR^2$; $-C(=O)-SH$; $-C(=W)SH$; $-C(=O)SR^2$; $-C(=W)SR^2$; $-C(=O)NH_2$; $-C(=W)NH_2$; $-C(=O)NHR^2$; $-C(=W)NHR^2$; $-C(=O)NR^2R^3$; $-C(=W)-NR^2R^3$; $-C(=W)NH(CH_2)_p$ -(amino acid); an amino acid; or $-(CH_2)_p$ (amino acid);

wherein at least two of R^4 , R^5 , R^6 , R^7 are not hydrogen;

Z is optionally substituted or unsubstituted acyl, $-C(=O)NH_2$; $-C(=W)-NH_2$; $-C(=O)NHR^2$; $-C(=W)NHR^2$; $-C(=O)NR^2R^3$; $-C(=W)NR^2R^3$; $-C(=W)NH(CH_2)_p$ -(amino acid); an amino acid; $-(CH_2)_p$ -(amino acid); $-C(=O)R^3$; $-C(=O)H$; $-C(=W)H$; $-C(=O)R^2$; $-C(=W)R^2$; $-C(=O)OR^3$; $-C(=O)OH$; $-C(=W)OH$; $-C(=O)OR^2$; $-C(=W)-OR^2$; $-C(=O)-SH$; $-C(=W)SH$; $-C(=O)SR^2$; $-C(=W)SR^2$; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl; CH_3 ; CF_3 ; vinyl bromide; $-CR^2R^2-S(O)_n-R^3$; $-CR^2R^2NH_2$; $-CR^2R^2NHR^2$; $-CR^2R^2NR^2R^3$; $-CR^2R^2-C(=O)R^2$; $-CN$; or halo;

Y is $S(O)_2$;

each W is independently O; S; NH; NR^2 ; $-NR^2R^2$; $-N-CN$; $-N-NH_2$; $-N-NHR^2$; $-N-NR^2R^3$; $-N-OH$; or $-N-OR^2$;

each R^2 is independently hydrogen; an optionally substituted or unsubstituted branched or unbranched lower alkyl, alkenyl or alkynyl; CH_3 ; CF_3 ; or vinyl bromide;

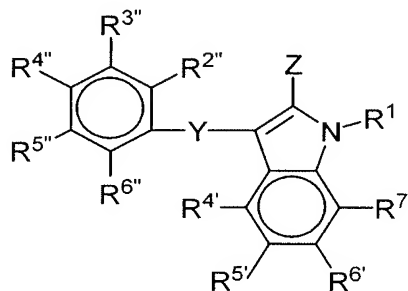
each R^3 is independently hydrogen; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl; CH_3 ; CF_3 ; vinyl bromide; $-CR^2R^2-S(O)_n-R^2$; $-CR^2R^2NH_2$; $-CR^2R^2NHR^2$; $-CR^2R^2NR^2R^2$; $-CR^2R^2-C(=O)R^2$; optionally substituted or unsubstituted aryl; optionally substituted or unsubstituted heterocycle; optionally substituted or unsubstituted alkylaryl; optionally substituted or unsubstituted alkylheterocycle; optionally substituted or unsubstituted aralkyl; or optionally substituted or unsubstituted heterocycle-alkyl;

each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

wherein the optionally substituted branched or unbranched alkyl, alkenyl, alkynyl, lower alkyl, lower alkenyl; lower alkynyl; acyl; aryl; heterocycle; alkaryl; alkylheterocycle; arylalkyl; or alkylheterocycle optionally is substituted with one or more of halogen; $-OH$; $-OR^2$; $-SH$; $-SR^2$; oxime; hydrazine; $-C(=O)H$; $-C(=W)H$; $-C(=O)R^2$; $-C(=W)R^2$; $-C(=O)OH$; $-C(=W)OH$; $-C(=O)OR^2$; $-C(=W)OR^2$; $-C(=O)SH$; $-C(=W)SH$; $-C(=O)SR^2$; $-C(=W)SR^2$; $-C(=O)NH_2$; $-C(=W)NH_2$; $-C(=O)-NHR^2$; $-C(=W)NHR^2$; $-C(=O)NR^2R^3$; $-C(=W)-NR^2R^3$; $-NH_2$; $-NHR^2$; $-NR^2R^3$; $-NHSO^2-C_{1-3}alkyl$; $-NR^2SO_2-C_{1-3}alkyl$; $-NHCO-C_{1-3}alkyl$; $-NR^2CO-C_{1-3}alkyl$; $-S(O)_n-R^3$; C_{1-3} alkoxy; C_{1-3} thioether; or an amino acid residue; in combination and/or alternation with one or more other anti-HIV agent, optionally in a pharmaceutically acceptable carrier or diluent.

Claim 25 (withdrawn): A method for salvage therapy in the treatment or prophylaxis of an HIV-infection in a host, comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein

R^1 is hydrogen; acyl; $-C(=O)H$; $-C(=W)H$; $-C(=O)R^2$; $-C(=W)R^2$; $-C(=O)OH$; $-C(=W)OH$; $-C(=O)OR^2$; $-C(=W)OR^2$; $-C(=O)SH$; $-C(=W)SH$; $-C(=O)SR^2$; $-C(=W)SR^2$; $-C(=O)NH_2$; $-C(=W)NH_2$; $-C(=O)NHR^2$; $-C(=W)NHR^2$; $-C(=O)NR^2R^3$; $-C(=W)NR^2R^3$; $-C(=W)NH-(CH_2)_p-(amino\ acid)$; or $-(CH_2)_p-(amino\ acid)$;

$R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$, $R^{2''}$, $R^{3''}$, $R^{4''}$, $R^{5''}$ and $R^{6''}$ are each independently H; halo; $-NO_2$; $-CN$; $-OH$; $-OR^2$; $-SH$; $-SR^2$; $-NH_2$; $-NHR^2$; $-NR^2R^3$; $-NHSO_2-C_{1-3}alkyl$; $-NR^2SO_2-C_{1-3}alkyl$; $-NHCO-C_{1-3}alkyl$; $-NR^2CO-C_{1-3}alkyl$; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl; CH_3 ; CF_3 ; vinyl bromide; $-CR^2R^2-S(O)_n-R^3$; $-CR^2R^2NH_2$; $-CR^2R^2NHR^2$; $-CR^2R^2NR^2R^3$; $-CR^2R^2-C(=O)R^2$; alkacyl; optionally substituted or unsubstituted acyl; $-C(=O)H$; $-C(=W)H$; $-C(=O)R^2$; $-C(=W)R^2$; $-C(=O)OH$; $-C(=W)OH$; $-C(=O)OR^2$; $-C(=W)OR^2$; $-C(=O)-SH$; $-C(=W)SH$; $-C(=O)SR^2$; $-C(=W)SR^2$; $-C(=O)NH_2$; $-C(=W)NH_2$; $-C(=O)NHR^2$; $-C(=W)NHR^2$; $-C(=O)NR^2R^3$; $-C(=W)-NR^2R^3$; $-C(=W)NH(CH_2)_p-(\text{amino acid})$; an amino acid; or $-(CH_2)_p(\text{amino acid})$;

wherein at least two of $R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$ are not hydrogen;

Z is optionally substituted or unsubstituted acyl, $-C(=O)NH_2$; $-C(=W)-NH_2$; $-C(=O)NHR^2$; $-C(=W)NHR^2$; $-C(=O)NR^2R^3$; $-C(=W)NR^2R^3$; $-C(=W)NH(CH_2)_p-(\text{amino acid})$; an amino acid; $-(CH_2)_p-(\text{amino acid})$; $-C(=O)R^3$; $-C(=O)H$; $-C(=W)H$; $-C(=O)R^2$; $-C(=W)R^2$; $-C(=O)OR^3$; $-C(=O)OH$; $-C(=W)OH$; $-C(=O)OR^2$; $-C(=W)-OR^2$; $-C(=O)-SH$; $-C(=W)SH$; $-C(=O)SR^2$; $-C(=W)SR^2$; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl; CH_3 ; CF_3 ; vinyl bromide; $-CR^2R^2-S(O)_n-R^3$; $-CR^2R^2NH_2$; $-CR^2R^2NHR^2$; $-CR^2R^2NR^2R^3$; $-CR^2R^2-C(=O)R^2$; $-CN$; or halo;

Y is $S(O)_2$;

each W is independently O; S; $-NH_2$; $-NHR^2$; $-NR^2R^2$; $-N-CN$; $-N-NH_2$; $-N-NHR^2$; $-N-NR^2R^3$; $-N-OH$; or $-N-OR^2$;

each R^2 is independently hydrogen; an optionally substituted or unsubstituted branched or unbranched lower alkyl, alkenyl or alkynyl; CH_3 ; CF_3 ; or vinyl bromide;

each R^3 is independently hydrogen; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl; CH_3 ; CF_3 ; vinyl bromide; $-CR^2R^2-S(O)_n-R^2$; $-CR^2R^2NH_2$; $-CR^2R^2NHR^2$; $-CR^2R^2NR^2R^2$; $-CR^2R^2-C(=O)R^2$; optionally substituted or unsubstituted aryl; optionally substituted or unsubstituted heterocycle; optionally substituted or unsubstituted alkylaryl; optionally substituted or unsubstituted alkylheterocycle; optionally substituted or unsubstituted aralkyl; or optionally substituted or unsubstituted heterocycle-alkyl;

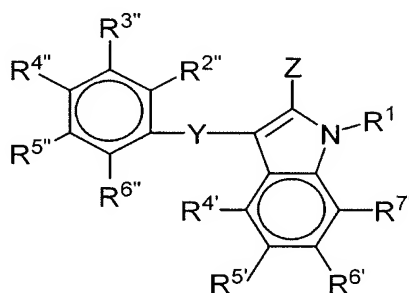
each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

wherein the optionally substituted branched or unbranched alkyl, alkenyl, alkynyl, lower alkyl, lower alkenyl; lower alkynyl; acyl; aryl; heterocycle; alkaryl; alkheterocycle; arylalkyl; or alkylheterocycle optionally is substituted with one or more of halogen; $-OH$;

-OR²; -SH; -SR²; oxime; hydrazine; -C(=O)H; -C(=W)H; -C(=O)R²; -C(=W)R²; -C(=O)OH;
-C(=W)OH; -C(=O)OR²; -C(=W)OR²; -C(=O)SH; -C(=W)SH; -C(=O)SR²; -C(=W)SR²;
-C(=O)NH₂; -C(=W)NH₂; -C(=O)-NHR²; -C(=W)NHR²; -C(=O)NR²R³; -C(=W)-NR²R³;
-NH₂; -NHR²; -NR²R³; -NHSO₂-C₁₋₃alkyl; -NR²SO₂-C₁₋₃alkyl; -NHCO-C₁₋₃alkyl;
-NR²CO-C₁₋₃alkyl; -S(O)_n-R³; C₁₋₃ alkoxy; C₁₋₃thioether; or an amino acid residue;
optionally in a pharmaceutically acceptable carrier or diluent.

Claim 26 (withdrawn): A method for salvage therapy in the treatment of prophylaxis of an HIV-infection in a host, comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein

R¹ is hydrogen; acyl; -C(=O)H; -C(=W)H; -C(=O)R²; -C(=W)R²; -C(=O)OH;
-C(=W)OH; -C(=O)OR²; -C(=W)OR²; -C(=O)SH; -C(=W)SH; -C(=O)SR²; -C(=W)SR²;
-C(=O)NH₂; -C(=W)NH₂; -C(=O)NHR²; -C(=W)NHR²; -C(=O)NR²R³; -C(=W)NR²R³;
-C(=W)NH-(CH₂)_p-(amino acid); or -(CH₂)_p-(amino acid);
R^{4'}, R^{5'}, R^{6'}, R^{7'}, R^{2''}, R^{3''}, R^{4''}, R^{5''} and R^{6''} are each independently H; halo; -NO₂;
-CN; -OH; -OR²; -SH; -SR²; -NH₂; -NHR²; -NR²R³; -NHSO₂-C₁₋₃alkyl; -NR²SO₂-C₁₋₃alkyl;
-NHCO-C₁₋₃alkyl; -NR²CO-C₁₋₃alkyl; optionally substituted or unsubstituted branched or
unbranched alkyl, alkenyl or alkynyl; CH₃; CF₃; vinyl bromide; -CR²R²-S(O)_n-R³;
-CR²R²NH₂; -CR²R²NHR²; -CR²R²NR²R³; -CR²R²-C(=O)R²; alkacyl; optionally substituted
or unsubstituted acyl; -C(=O)H; -C(=W)H; -C(=O)R²; -C(=W)R²; -C(=O)OH; -C(=W)OH;
-C(=O)OR²; -C(=W)OR²; -C(=O)-SH; -C(=W)SH; -C(=O)SR²; -C(=W)SR²; -C(=O)NH₂;
-C(=W)NH₂; -C(=O)NHR²; -C(=W)NHR²; -C(=O)NR²R³; -C(=W)-NR²R³;
-C(=W)NH(CH₂)_p-(amino acid); an amino acid; or -(CH₂)_p(amino acid);

wherein at least two of R^{4'}, R^{5'}, R^{6'}, R^{7'} are not hydrogen;

Z is optionally substituted or unsubstituted acyl, -C(=O)NH₂; -C(=W)-NH₂;
-C(=O)NHR²; -C(=W)NHR²; -C(=O)NR²R³; -C(=W)NR²R³; -C(=W)NH(CH₂)_p-(amino
acid); an amino acid; -(CH₂)_p-(amino acid); -C(=O)R³; -C(=O)H; -C(=W)H; -C(=O)R²;

-C(=W)R²; -C(=O)OR³; -C(=O)OH; -C(=W)OH; -C(=O)OR²; -C(=W)-OR²; -C(=O)-SH;
-C(=W)SH; -C(=O)SR²; -C(=W)SR²; optionally substituted or unsubstituted branched or
unbranched alkyl, alkenyl or alkynyl; CH₃; CF₃; vinyl bromide; -CR²R²-S(O)_n-R³;
-CR²R²NH₂; -CR²R²NHR²; CR²R²NR²R³; -CR²R²-C(=O)R²; -CN; or halo;

Y is S(O)₂;

each W is independently O; S; -NH₂; -NHR²; -NR²R²; -N-CN; -N-NH₂; -N-NHR²;
-N-NR²R³; -N-OH; or -N-OR²;

each R² is independently hydrogen; an optionally substituted or unsubstituted
branched or unbranched lower alkyl, alkenyl or alkynyl; CH₃; CF₃; or vinyl bromide;

each R³ is independently hydrogen; optionally substituted or unsubstituted branched
or unbranched alkyl, alkenyl or alkynyl; CH₃; CF₃; vinyl bromide; -CR²R²-S(O)_n-R²;
-CR²R²NH₂; -CR²R²NHR²; -CR²R²NR²R²; -CR²R²-C(=O)R²; optionally substituted or
unsubstituted aryl; optionally substituted or unsubstituted heterocycle; optionally substituted
or unsubstituted alkylaryl; optionally substituted or unsubstituted alkylheterocycle;
optionally substituted or unsubstituted aralkyl; or optionally substituted or unsubstituted
heterocycle-alkyl;

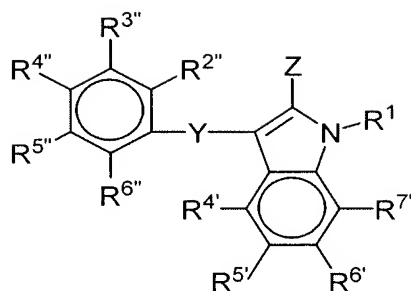
each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

wherein the optionally substituted branched or unbranched alkyl, alkenyl, alkynyl,
lower alkyl, lower alkenyl; lower alkynyl; acyl; aryl; heterocycle; alkaryl; alkheterocycle;
arylalkyl; or alkylheterocycle optionally is substituted with one or more of halogen; -OH;
-OR²; -SH; -SR²; oxime; hydrazine; -C(=O)H; -C(=W)H; -C(=O)R²; -C(=W)R²; -C(=O)OH;
-C(=W)OH; -C(=O)OR²; -C(=W)OR²; -C(=O)SH; -C(=W)SH; -C(=O)SR²; -C(=W)SR²;
-C(=O)NH₂; -C(=W)NH₂; -C(=O)-NHR²; -C(=W)NHR²; -C(=O)NR²R³; -C(=W)-NR²R³;
-NH₂; -NHR²; -NR²R³; -NHSO₂-C₁₋₃alkyl; -NR²SO₂-C₁₋₃alkyl; -NHCO-C₁₋₃alkyl;
-NR²CO-C₁₋₃alkyl; -S(O)_n-R³; C₁₋₃ alkoxy; C₁₋₃thioether; or an amino acid residue;

in combination and/or alternation with one or more other anti-HIV agent, optionally
in a pharmaceutically acceptable carrier or diluent.

Claim 27 (previously presented): A method for the treatment of an HIV-infection in a host,
wherein the HIV is resistant to one or more reverse transcriptase inhibitors, comprising
administering to said host an effective anti-HIV treatment amount of a compound of formula
(I):



or a pharmaceutically acceptable salt thereof, wherein

R^1 is hydrogen; acyl; $-C(=O)H$; $-C(=W)H$; $-C(=O)R^2$; $-C(=W)R^2$; $-C(=O)OH$; $-C(=W)OH$; $-C(=O)OR^2$; $-C(=W)OR^2$; $-C(=O)SH$; $-C(=W)SH$; $-C(=O)SR^2$; $-C(=W)SR^2$; $-C(=O)NH_2$; $-C(=W)NH_2$; $-C(=O)NHR^2$; $-C(=W)NHR^2$; $-C(=O)NR^2R^3$; $-C(=W)NR^2R^3$; $-C(=W)NH-(CH_2)_p$ -(amino acid); or $-(CH_2)_p$ -(amino acid);

R^4 , R^5 , R^6 , R^7 , R^2 , R^3 , R^4 , R^5 and R^6 are each independently H; halo; $-NO_2$; $-CN$; $-OH$; $-OR^2$; $-SH$; $-SR^2$; $-NH_2$; $-NHR^2$; $-NR^2R^3$; $-NHSO_2-C_{1-3}alkyl$; $-NR^2SO_2-C_{1-3}alkyl$; $-NHCO-C_{1-3}alkyl$; $-NR^2CO-C_{1-3}alkyl$; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl; CH_3 ; CF_3 ; vinyl bromide; $-CR^2R^2-S(O)_n-R^3$; $-CR^2R^2NH_2$; $-CR^2R^2NHR^2$; $-CR^2R^2NR^2R^3$; $-CR^2R^2-C(=O)R^2$; alkacyl; optionally substituted or unsubstituted acyl; $-C(=O)H$; $-C(=W)H$; $-C(=O)R^2$; $-C(=W)R^2$; $-C(=O)OH$; $-C(=W)OH$; $-C(=O)OR^2$; $-C(=W)OR^2$; $-C(=O)-SH$; $-C(=W)SH$; $-C(=O)SR^2$; $-C(=W)SR^2$; $-C(=O)NH_2$; $-C(=W)NH_2$; $-C(=O)NHR^2$; $-C(=W)NHR^2$; $-C(=O)NR^2R^3$; $-C(=W)-NR^2R^3$; $-C(=W)NH(CH_2)_p$ -(amino acid); an amino acid; or $-(CH_2)_p$ (amino acid);

wherein at least two of R^4 , R^5 , R^6 , R^7 are not hydrogen;

Z is optionally substituted or unsubstituted acyl; $-C(=O)NH_2$; $-C(=W)-NH_2$; $-C(=O)NHR^2$; $-C(=W)NHR^2$; $-C(=O)NR^2R^3$; $-C(=W)NR^2R^3$; $-C(=W)NH(CH_2)_p$ -(amino acid); an amino acid; $-(CH_2)_p$ -(amino acid); $-C(=O)R^3$; $-C(=O)H$; $-C(=W)H$; $-C(=O)R^2$; $-C(=W)R^2$; $-C(=O)OR^3$; $-C(=O)OH$; $-C(=W)OH$; $-C(=O)OR^2$; $-C(=W)-OR^2$; $-C(=O)-SH$; $-C(=W)SH$; $-C(=O)SR^2$; $-C(=W)SR^2$; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl; CH_3 ; CF_3 ; vinyl bromide; $-CR^2R^2-S(O)_n-R^3$; $-CR^2R^2NH_2$; $-CR^2R^2NHR^2$; $-CR^2R^2NR^2R^3$; $-CR^2R^2-C(=O)R^2$; $-CN$; or halo;

Y is $S(O)_2$;

each W is independently O; S; NH; NR^2 ; $-NR^2R^2$; $-N-CN$; $-N-NH_2$; $-N-NHR^2$; $-N-NR^2R^3$; $-N-OH$; or $-N-OR^2$;

each R^2 is independently hydrogen; an optionally substituted or unsubstituted branched or unbranched lower alkyl, alkenyl or alkynyl; CH_3 ; CF_3 ; or vinyl bromide;

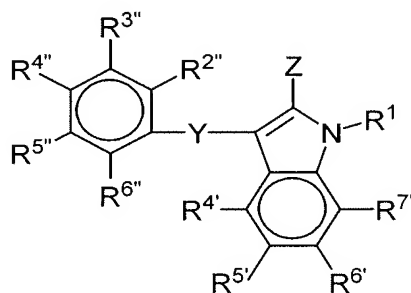
each R^3 is independently hydrogen; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl; CH_3 ; CF_3 ; vinyl bromide; $-CR^2R^2-S(O)_n-R^2$; $-CR^2R^2NH_2$; $-CR^2R^2NHR^2$; $-CR^2R^2NR^2R^2$; $-CR^2R^2-C(=O)R^2$; optionally substituted or unsubstituted aryl; optionally substituted or unsubstituted heterocycle; optionally substituted or unsubstituted alkylaryl; optionally substituted or unsubstituted alkylheterocycle; optionally substituted or unsubstituted aralkyl; or optionally substituted or unsubstituted heterocycle-alkyl;

each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

wherein the optionally substituted branched or unbranched alkyl, alkenyl, alkynyl, lower alkyl, lower alkenyl; lower alkynyl; acyl; aryl; heterocycle; alkaryl; alkylheterocycle; arylalkyl; or alkylheterocycle optionally is substituted with one or more of halogen; $-OH$; $-OR^2$; $-SH$; $-SR^2$; oxime; hydrazine; $-C(=O)H$; $-C(=W)H$; $-C(=O)R^2$; $-C(=W)R^2$; $-C(=O)OH$; $-C(=W)OH$; $-C(=O)OR^2$; $-C(=W)OR^2$; $-C(=O)SH$; $-C(=W)SH$; $-C(=O)SR^2$; $-C(=W)SR^2$; $-C(=O)NH_2$; $-C(=W)NH_2$; $-C(=O)-NHR^2$; $-C(=W)-NHR^2$; $-C(=O)NR^2R^3$; $-C(=W)-NR^2R^3$; $-NH_2$; $-NHR^2$; $-NR^2R^3$; $-NHSO_2-C_{1-3}alkyl$; $-NR^2SO_2-C_{1-3}alkyl$; $-NHCO-C_{1-3}alkyl$; $-NR^2CO-C_{1-3}alkyl$; $-S(O)_n-R^3$; $C_{1-3}alkoxy$; $C_{1-3}thioether$; or an amino acid residue; optionally in a pharmaceutically acceptable carrier or diluent.

Claim 28 (previously presented): A method for the treatment of an HIV-infection in a host, wherein the HIV has a mutation at lysine 103 \rightarrow asparagine and/or tyrosine 181 \rightarrow cysteine in HIV reverse transcriptase, comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein

R^1 is hydrogen; acyl; $-C(=O)H$; $-C(=W)H$; $-C(=O)R^2$; $-C(=W)R^2$; $-C(=O)OH$; $-C(=W)OH$; $-C(=O)OR^2$; $-C(=W)OR^2$; $-C(=O)SH$; $-C(=W)SH$; $-C(=O)SR^2$; $-C(=W)SR^2$; $-C(=O)NH_2$; $-C(=W)NH_2$; $-C(=O)-NHR^2$; $-C(=W)-NHR^2$; $-C(=O)NR^2R^3$; $-C(=W)NR^2R^3$; $-C(=W)NH-(CH_2)_p-(amino\ acid)$; or $-(CH_2)_p-(amino\ acid)$;

$R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$, $R^{2''}$, $R^{3''}$, $R^{4''}$, $R^{5''}$ and $R^{6''}$ are each independently H; halo; $-\text{NO}_2$; $-\text{CN}$; $-\text{OH}$; $-\text{OR}^2$; $-\text{SH}$; $-\text{SR}^2$; $-\text{NH}_2$; $-\text{NHR}^2$; $-\text{NR}^2\text{R}^3$; $-\text{NH}\text{SO}_2\text{-C}_{1-3}\text{alkyl}$; $-\text{NR}^2\text{SO}_2\text{-C}_{1-3}\text{alkyl}$; $-\text{NHCO-C}_{1-3}\text{alkyl}$; $-\text{NR}^2\text{CO-C}_{1-3}\text{alkyl}$; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl; CH_3 ; CF_3 ; vinyl bromide; $-\text{CR}^2\text{R}^2\text{-S(O)}_n\text{-R}^3$; $-\text{CR}^2\text{R}^2\text{NH}_2$; $-\text{CR}^2\text{R}^2\text{NHR}^2$; $-\text{CR}^2\text{R}^2\text{NR}^2\text{R}^3$; $-\text{CR}^2\text{R}^2\text{-C(=O)R}^2$; alkacyl; optionally substituted or unsubstituted acyl; $-\text{C(=O)H}$; $-\text{C(=W)H}$; $-\text{C(=O)R}^2$; $-\text{C(=W)R}^2$; $-\text{C(=O)OH}$; $-\text{C(=W)OH}$; $-\text{C(=O)OR}^2$; $-\text{C(=W)OR}^2$; $-\text{C(=O)SH}$; $-\text{C(=W)SH}$; $-\text{C(=O)SR}^2$; $-\text{C(=W)SR}^2$; $-\text{C(=O)NH}_2$; $-\text{C(=W)NH}_2$; $-\text{C(=O)NHR}^2$; $-\text{C(=W)NHR}^2$; $-\text{C(=O)NR}^2\text{R}^3$; $-\text{C(=W)NR}^2\text{R}^3$; $-\text{C(=W)NH(CH}_2)_p\text{-(amino acid)}$; an amino acid; or $-(\text{CH}_2)_p\text{(amino acid)}$;

wherein at least two of $R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$ are not hydrogen;

Z is optionally substituted or unsubstituted acyl, $-\text{C(=O)NH}_2$; $-\text{C(=W)NH}_2$; $-\text{C(=O)NHR}^2$; $-\text{C(=W)NHR}^2$; $-\text{C(=O)NR}^2\text{R}^3$; $-\text{C(=W)NR}^2\text{R}^3$; $-\text{C(=W)NH(CH}_2)_p\text{-(amino acid)}$; an amino acid; $-(\text{CH}_2)_p\text{-(amino acid)}$; $-\text{C(=O)R}^3$; $-\text{C(=O)H}$; $-\text{C(=W)H}$; $-\text{C(=O)R}^2$; $-\text{C(=W)R}^2$; $-\text{C(=O)OR}^3$; $-\text{C(=O)OH}$; $-\text{C(=W)OH}$; $-\text{C(=O)OR}^2$; $-\text{C(=W)OR}^2$; $-\text{C(=O)SH}$; $-\text{C(=W)SH}$; $-\text{C(=O)SR}^2$; $-\text{C(=W)SR}^2$; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl; CH_3 ; CF_3 ; vinyl bromide; $-\text{CR}^2\text{R}^2\text{-S(O)}_n\text{-R}^3$; $-\text{CR}^2\text{R}^2\text{NH}_2$; $-\text{CR}^2\text{R}^2\text{NHR}^2$; $-\text{CR}^2\text{R}^2\text{NR}^2\text{R}^3$; $-\text{CR}^2\text{R}^2\text{-C(=O)R}^2$; $-\text{CN}$; or halo;

Y is S(O)_2 ;

each W is independently O; S; NH; NR^2 ; $-\text{NR}^2\text{R}^2$; $-\text{N-CN}$; $-\text{N-NH}_2$; $-\text{N-NHR}^2$; $-\text{N-NR}^2\text{R}^3$; $-\text{N-OH}$; or $-\text{N-OR}^2$;

each R^2 is independently hydrogen; an optionally substituted or unsubstituted branched or unbranched lower alkyl, alkenyl or alkynyl; CH_3 ; CF_3 ; or vinyl bromide;

each R^3 is independently hydrogen; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl; CH_3 ; CF_3 ; vinyl bromide; $-\text{CR}^2\text{R}^2\text{-S(O)}_n\text{-R}^2$; $-\text{CR}^2\text{R}^2\text{NH}_2$; $-\text{CR}^2\text{R}^2\text{NHR}^2$; $-\text{CR}^2\text{R}^2\text{NR}^2\text{R}^2$; $-\text{CR}^2\text{R}^2\text{-C(=O)R}^2$; optionally substituted or unsubstituted aryl; optionally substituted or unsubstituted heterocycle; optionally substituted or unsubstituted alkylaryl; optionally substituted or unsubstituted alkylheterocycle; optionally substituted or unsubstituted aralkyl; or optionally substituted or unsubstituted heterocycle-alkyl;

each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

wherein the optionally substituted branched or unbranched alkyl, alkenyl, alkynyl, lower alkyl, lower alkenyl; lower alkynyl; acyl; aryl; heterocycle; alkaryl; alkylheterocycle; arylalkyl; or alkylheterocycle optionally is substituted with one or more of halogen; $-\text{OH}$;

-OR²; -SH; -SR²; oxime; hydrazine; -C(=O)H; -C(=W)H; -C(=O)R²; -C(=W)R²; -C(=O)OH;
-C(=W)OH; -C(=O)OR²; -C(=W)OR²; -C(=O)SH; -C(=W)SH; -C(=O)SR²; -C(=W)SR²;
-C(=O)NH₂; -C(=W)NH₂; -C(=O)-NHR²; -C(=W)NHR²; -C(=O)NR²R³; -C(=W)-NR²R³;
-NH₂; -NHR²; -NR²R³; -NHSO₂-C₁₋₃alkyl; -NR²SO₂-C₁₋₃alkyl; -NHCO-C₁₋₃alkyl;
-NR²CO-C₁₋₃alkyl; -S(O)_n-R; C₁₋₃ alkoxy; C₁₋₃thioether; or an amino acid residue;

in combination and/or alternation with one or more other anti-HIV agent, optionally
in a pharmaceutically acceptable carrier or diluent.

Claim 29 (original): The method of any one of claims 19-28 wherein the host is a human.

Claim 30 (currently amended): The method of any one of claims 19 or 24 wherein:

R¹ is hydrogen;

R^{4'}, R^{5'}, R^{6'}, R^{7'} are each independently H; halo; -NO₂; -CN; -OR²; -NR²R³;
-NHSO₂-C₁₋₃alkyl; -NHCO-C₁₋₃alkyl; oxime, hydrazine, or C₁₋₃ alkyl or alkenyl optionally
substituted with one or more of -OH, -SH, -C(O)H, -COOH, halogen, -NR²R², -C₁₋₃ alkoxy or
C₁₋₃ thioether, wherein at least two of R^{4'}, R^{6'} or R^{7'} are not hydrogen;

R^{2''}, R^{3''}, R^{4''}, R^{5''} and R^{6''} are each independently H; halo; -NO₂; -CN; -OH; -OR²;
-NR²R³; -NHSO₂-C₁₋₃alkyl; -NHCO-C₁₋₃alkyl; C₁₋₅alkoxy; oxime, hydrazine, -C₁₋₅alkyl or
alkenyl optionally substituted with one or more of -OH, -SH, -C(O)H, -COOH, halogen,
-NR²R², -C₁₋₅ thioether or -C₁₋₅ alkoxy,

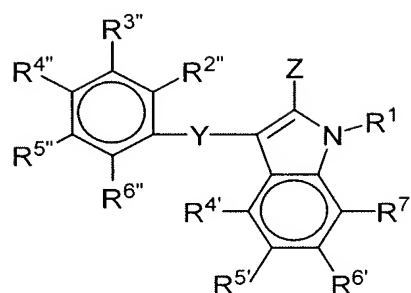
Z is -CN, -C(=W)NR²R³, -C(=O)R³, -C(=O)OR³, -CR²R²-S(O)_n-R³, -CR²R²NHR²,
CR²R²-CO-R² or substituted or unsubstituted lower alkyl;

Y is S(O)₂;

each W is independently O; S; -N-CN or -N-OR²; and

each R² is independently hydrogen or C₁₋₃ alkyl.

Claim 31 (currently amended): A method for the treatment of an HIV infection in a host
comprising administering to said host an effective anti-HIV treatment amount of a compound
of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

R^1 is hydrogen;

$R^{4'}$, $R^{5'}$, $R^{7'}$ are each independently H; halo; $-\text{NO}_2$; $-\text{CN}$; $-\text{OR}^2$; $-\text{NR}^2\text{R}^3$;

$-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$; $-\text{NHCO-C}_{1-3}\text{alkyl}$; oxime, hydrazine, or C_{1-3} alkyl or alkenyl optionally substituted with one or more of $-\text{OH}$, $-\text{SH}$, $-\text{C(O)H}$, $-\text{COOH}$, halogen, $-\text{NR}^2\text{R}^2$, $-\text{C}_{1-3}$ alkoxy or C_{1-3} thioether, wherein at least two of $R^{4'}$, $R^{6'}$ or $R^{7'}$ [[is]]are not hydrogen;

$R^{6'}$ is H; halo; $-\text{NO}_2$; $-\text{CN}$; $-\text{NR}^2\text{R}^3$; $-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$; $-\text{NHCO-C}_{1-3}\text{alkyl}$; oxime, hydrazine, or C_{1-3} alkyl or alkenyl optionally substituted with one or more of $-\text{OH}$, $-\text{SH}$, $-\text{C(O)H}$, $-\text{COOH}$, halogen, $-\text{NR}^2\text{R}^2$, $-\text{C}_{1-3}$ alkoxy or C_{1-3} thioether;

$R^{2''}$, $R^{3''}$, $R^{4''}$, $R^{5''}$ and $R^{6''}$ are each independently H; halo; $-\text{NO}_2$; $-\text{CN}$; $-\text{OR}^2$; $-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$; $-\text{NHCO-C}_{1-3}\text{alkyl}$; oxime, hydrazine, $-\text{C}_{1-5}$ alkyl or alkenyl optionally substituted with one or more of $-\text{OH}$, $-\text{SH}$, $-\text{C(O)H}$, $-\text{COOH}$, halogen, $-\text{NR}^2\text{R}^2$, $-\text{C}_{1-5}$ thioether or $-\text{C}_{1-5}$ alkoxy,

Z is $-\text{C(=W)NR}^2\text{R}^3$ or $-\text{C(=O)R}^3$; $-\text{CR}^2\text{R}^2\text{NHR}^2$, $\text{CR}^2\text{R}^2\text{-CO-R}^2$ or substituted or unsubstituted lower alkyl;

Y is S(O)_2 ;

each W is independently O; S; $-\text{N-CN}$ or $-\text{N-OR}^2$;

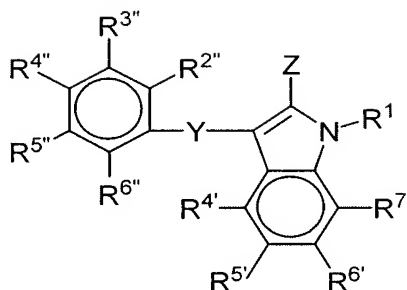
each R^2 is independently hydrogen or C_{1-3} alkyl; and

each R^3 is independently C_{1-5} alkyl, C_{1-5} alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of $\text{C(O)NR}^2\text{R}^2$, $-\text{NR}^2\text{R}^2$, $-(\text{CH}_2)_m\text{C(O)NR}^2\text{R}^2$, $(\text{CH}_2)_m\text{C(=W)-NH(CH}_2)_p\text{-amino acid}$;

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is 1, 2, 3, 4 or 5.

Claim 32 (currently amended): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

R^1 is hydrogen;

$R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$ are each independently H; halo; $-\text{NO}_2$; $-\text{CN}$; $-\text{OR}^2$; $-\text{NR}^2\text{R}^3$; $-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$; $-\text{NHCO-C}_{1-3}\text{alkyl}$; oxime, hydrazine, or C_{1-3} alkyl or alkenyl optionally substituted with one or more of $-\text{OH}$, $-\text{SH}$, $-\text{C(O)H}$, $-\text{COOH}$, halogen, $-\text{NR}^2\text{R}^2$, $-\text{C}_{1-3}$ alkoxy or C_{1-3} thioether, wherein at least two of $R^{4'}$, $R^{6'}$ or $R^{7'}$ [[is]]are not hydrogen;

$R^{2''}$, $R^{3''}$, $R^{4''}$, $R^{5''}$ and $R^{6''}$ are each independently H; halo; $-\text{NO}_2$; $-\text{CN}$; $-\text{OH}$; $-\text{OR}^2$; $-\text{NR}^2\text{R}^3$; $-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$; $-\text{NHCO-C}_{1-3}\text{alkyl}$; $\text{C}_{1-5}\text{alkoxy}$; oxime, hydrazine, $-\text{C}_{1-5}$ alkyl or alkenyl optionally substituted with one or more of $-\text{OH}$, $-\text{SH}$, $-\text{C(O)H}$, $-\text{COOH}$, halogen, $-\text{NR}^2\text{R}^2$, $-\text{C}_{1-5}$ thioether or $-\text{C}_{1-5}$ alkoxy;

Z is $-\text{C(=W)NR}^2\text{R}^3$ or $-\text{C(=O)R}^3$; $-\text{CR}^2\text{R}^2\text{NHR}^2$, $\text{CR}^2\text{R}^2\text{-CO-R}^2$ or substituted or unsubstituted lower alkyl;

Y is S(O)_2 ;

each W is independently O; S; $-\text{N-CN}$ or $-\text{N-OR}^2$;

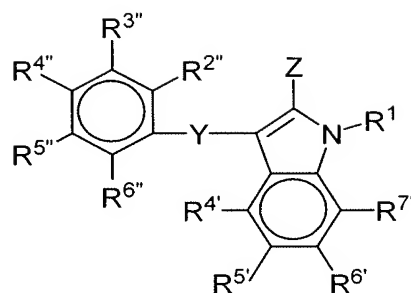
each R^2 is independently hydrogen or C_{1-3} alkyl; and

each R^3 is independently C_{1-5} alkyl, C_{1-5} alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of $\text{C(O)NR}^2\text{R}^2$, $-\text{NR}^2\text{R}^2$, $-(\text{CH}_2)_m\text{C(O)NR}^2\text{R}^2$, $-(\text{CH}_2)_m\text{C(=W)-NH(CH}_2)_p\text{-amino acid}$);

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is 1, 2, 3, 4 or 5.

Claim 33 (previously presented): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

R^1 is hydrogen;

$R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$ are each independently H or halo;

$R^{2''}$, $R^{3''}$, $R^{4''}$, $R^{5''}$ and $R^{6''}$ are each independently H; halo; $-\text{NO}_2$; $-\text{CN}$; $-\text{OR}^2$;

$-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$; $-\text{NHCO-C}_{1-3}\text{alkyl}$; oxime, hydrazine, $-\text{C}_{1-5}\text{ alkyl}$ or $-\text{C}_{1-5}\text{ alkenyl}$ optionally substituted with one or more of $-\text{OH}$, $-\text{SH}$, $-\text{C(O)H}$, $-\text{COOH}$, halogen, $-\text{NR}^2\text{R}^2$, $-\text{C}_{1-5}\text{ thioether}$ or $-\text{C}_{1-5}\text{ alkoxy}$,

wherein at least two of $R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$ are not hydrogen;

Z is $-\text{C(=W)NR}^2\text{R}^3$, $-\text{C(=O)R}^3$ or $-\text{CR}^2\text{R}^2\text{NHR}^2$;

Y is S(O)_2 ;

each W is independently O; S; $-\text{N-CN}$ or $-\text{N-OR}^2$;

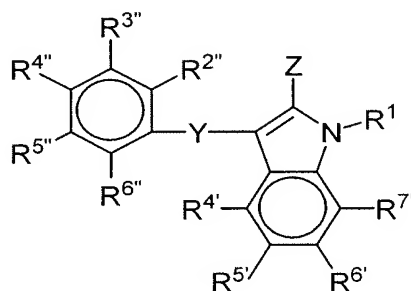
each R^2 is independently hydrogen or $\text{C}_{1-3}\text{ alkyl}$;

each R^3 is independently $\text{C}_{1-5}\text{ alkyl}$, $\text{C}_{1-5}\text{ alkenyl}$, aryl or heterocycle unsubstituted or substituted with one or more of $\text{C(O)NR}^2\text{R}^2$, $-\text{NR}^2\text{R}^2$, $-(\text{CH}_2)_m\text{C(O)NR}^2\text{R}^2$, $-(\text{CH}_2)_m\text{C(=W)-NH(CH}_2)_p\text{-amino acid)}$;

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is independently 0, 1, 2, 3, 4 or 5.

Claim 34 (previously presented): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):

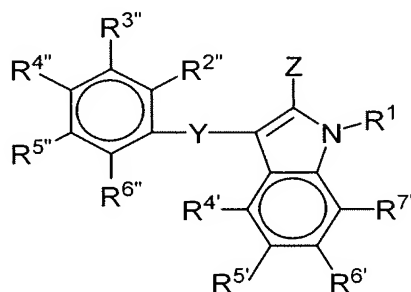


or a pharmaceutically acceptable salt thereof, wherein:

R^1 is hydrogen;
 $R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$ are each independently H or halo;
 $R^{2''}$, $R^{3''}$, $R^{4''}$, $R^{5''}$ and $R^{6''}$ are each independently H; halo; $-\text{NO}_2$; $-\text{CN}$; $-\text{OR}^2$;
 $-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$; $-\text{NHCO-C}_{1-3}\text{alkyl}$; oxime, hydrazine, $-\text{C}_{1-5}$ alkyl or alkenyl optionally
substituted with one or more of $-\text{OH}$, $-\text{SH}$, $-\text{C(O)H}$, $-\text{COOH}$, halogen, $-\text{NR}^2\text{R}^2$, $-\text{C}_{1-5}$ thioether
or $-\text{C}_{1-5}$ alkoxy,

wherein at least two of $R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$ are not hydrogen;
Z is $-\text{C(=O)R}^3$;
Y is S(O)_2 ;
each W is independently O; S; $-\text{N-CN}$ or $-\text{N-OR}^2$;
each R^2 is independently hydrogen or C_{1-3} alkyl;
each R^3 is independently C_{1-5} alkyl, C_{1-5} alkenyl, aryl or heterocycle unsubstituted or
substituted with one or more of $\text{C(O)NR}^2\text{R}^2$, $-\text{NR}^2\text{R}^2$, $-(\text{CH}_2)_m\text{C(O)NR}^2\text{R}^2$,
 $-(\text{CH}_2)_m\text{C(=W)-NH(CH}_2)_p\text{-amino acid}$);
each p is independently 0, 1, 2, 3, 4 or 5; and
each m is independently 0, 1, 2, 3, 4 or 5.

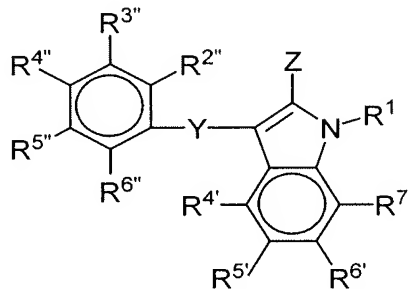
Claim 35 (previously presented): A method for the treatment of an HIV infection in a host
comprising administering to said host an effective anti-HIV treatment amount of a compound
of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:
 R^1 is hydrogen;
 $R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$ are each independently H or halo;
 $R^{2''}$, $R^{3''}$, $R^{4''}$, $R^{5''}$ and $R^{6''}$ are each independently H; halo; or $-\text{C}_{1-5}$ alkyl or alkenyl
optionally substituted with one or more of $-\text{OH}$, $-\text{SH}$, $-\text{C(O)H}$, $-\text{COOH}$, halogen, $-\text{NR}^2\text{R}^2$,
 $-\text{C}_{1-5}$ thioether or $-\text{C}_{1-5}$ alkoxy,
wherein at least two of $R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$ are not hydrogen;
Z is $-\text{C(=W)NR}^2\text{R}^3$ or $-\text{C(=O)R}^3$;

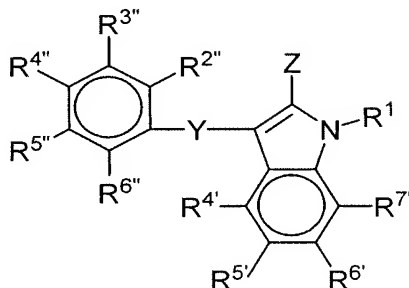
Y is S(O)₂;
each W is independently O; S; -N-CN or -N-OR²;
each R² is independently hydrogen or C₁₋₃ alkyl;
each R³ is independently C₁₋₅ alkyl, C₁₋₅ alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of C(O)NR²R², -NR²R², -(CH₂)_mC(O)NR²R², -(CH₂)_mC(=W)-NH(CH₂)_p-amino acid);
each p is independently 0, 1, 2, 3, 4 or 5; and
each m is independently 0, 1, 2, 3, 4 or 5.

Claim 36 (previously presented): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:
R¹ is hydrogen;
R^{4'}, R^{5'}, R^{6'}, R^{7'} are each independently H or halo;
R^{2''}, R^{3''}, R^{4''}, R^{5''} and R^{6''} are each independently H or -C₁₋₅ alkyl or alkenyl optionally substituted with one or more of -OH, -SH, -C(O)H, -COOH, halogen, -NR²R², -C₁₋₅ thioether or -C₁₋₅ alkoxy,
wherein at least two of R^{4'}, R^{5'}, R^{6'}, R^{7'} are not hydrogen;
Z is -C(=W)NR²R³ or -C(=O)R³;
Y is S(O)₂;
each W is independently O or S;
each R² is independently hydrogen or C₁₋₃ alkyl;
each R³ is independently C₁₋₅ alkyl, C₁₋₅ alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of C(O)NR²R², -NR²R², -(CH₂)_mC(O)NR²R², -(CH₂)_mC(=W)-NH(CH₂)_p-amino acid);
each p is independently 0, 1, 2, 3, 4 or 5; and
each m is independently 0, 1, 2, 3, 4 or 5.

Claim 37 (currently amended): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

R^1 is hydrogen;

R^4 , R^5 , R^6 , R^7 are each independently H or halo, wherein at least two of R^4 , R^5 , R^6 or R^7 are not hydrogen;

$R^{2''}$, $R^{3''}$, $R^{4''}$, $R^{5''}$ and $R^{6''}$ are each independently H; halo; $-NO_2$; $-CN$; $-OR^2$; $-NHSO_2-C_{1-3}alkyl$; $-NHCO-C_{1-3}alkyl$; oxime, hydrazine, $-C_{1-5}alkyl$ or $alkenyl$ optionally substituted with one or more of $-OH$, $-SH$, $-C(O)H$, $-COOH$, halogen, $-NR^2R^2$, $-C_{1-5}thioether$ or $-C_{1-5}alkoxy$;

Z is $-C(=W)NR^2R^3$ or $-C(=O)R^3$;

Y is $S(O)_2$;

each W is independently O; S; $-N-CN$ or $-N-OR^2$;

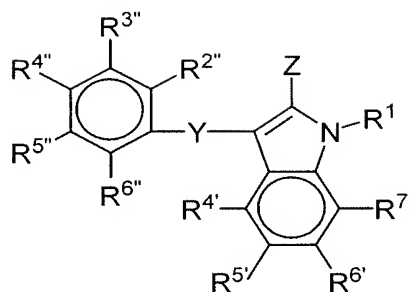
each R^2 is independently hydrogen or $C_{1-3}alkyl$;

each R^3 is independently $C_{1-5}alkyl$, $C_{1-5}alkenyl$, aryl or heterocycle unsubstituted or substituted with one or more of $C(O)NR^2R^2$, $-NR^2R^2$, $-(CH_2)_mC(O)NR^2R^2$, $-(CH_2)_mC(=W)-NH(CH_2)_p-amino\ acid$;

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is independently 0, 1, 2, 3, 4 or 5.

Claim 38 (currently amended): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

R^1 is hydrogen;

R^4 , R^5 , R^6 , R^7 are each independently H or halo, wherein at least two of R^4 , R^5 , R^6 or R^7 are not hydrogen;

R^2 , R^3 , R^4 , R^5 and R^6 are each independently H or C_{1-5} alkyl or alkenyl optionally substituted with one or more of -OH, -SH, -C(O)H, -COOH, halogen, $-NR^2R^2$, $-C_{1-5}$ thioether or $-C_{1-5}$ alkoxy,

Z is $-C(=W)NR^2R^3$ or $-C(=O)R^3$;

Y is $S(O)_2$;

each W is independently O; S; -N-CN or -N-OR²;

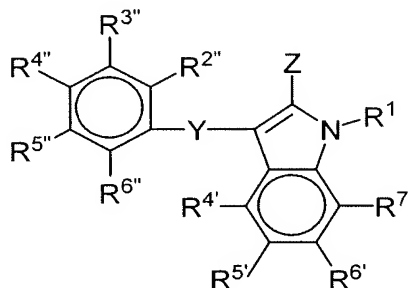
each R^2 is independently hydrogen or C_{1-3} alkyl; and

each R^3 is independently C_{1-5} alkyl, C_{1-5} alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of $C(O)NR^2R^2$, $-NR^2R^2$, $-(CH_2)_mC(O)NR^2R^2$, $-(CH_2)_mC(=W)-NH(CH_2)_p$ -amino acid);

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is independently 0, 1, 2, 3, 4 or 5.

Claim 39 (currently amended): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

R^1 is hydrogen;

$R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$ are each independently H or halo, wherein at least two of $R^{4'}$, $R^{5'}$, $R^{6'}$ or $R^{7'}$ are not hydrogen;

$R^{2''}$, $R^{3''}$, $R^{4''}$, $R^{5''}$ and $R^{6''}$ are each independently H or $-C_{1-5}$ alkyl or alkenyl optionally substituted with one or more of $-OH$, $-SH$, $-C(O)H$, $-COOH$, halogen, $-NR^2R^2$, $-C_{1-5}$ thioether or $-C_{1-5}$ alkoxy,

Z is $-C(=O)R^3$;

Y is $S(O)_2$;

each W is independently O; S; $-N-CN$ or $-N-OR^2$;

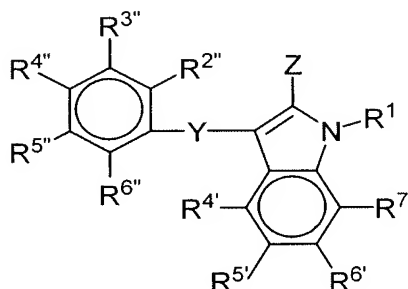
each R^2 is independently hydrogen or C_{1-3} alkyl;

each R^3 is independently C_{1-5} alkyl, C_{1-5} alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of $C(O)NR^2R^2$, $-NR^2R^2$, $-(CH_2)_mC(O)NR^2R^2$, $-(CH_2)_mC(=W)-NH(CH_2)_p$ -amino acid);

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is 1, 2, 3, 4 or 5.

Claim 40 (previously presented): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

R^1 is hydrogen;

$R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$ are each independently H or halo;

$R^{2''}$, $R^{3''}$, $R^{4''}$, $R^{5''}$ and $R^{6''}$ are each independently H or $-C_{1-5}$ alkyl or alkenyl optionally substituted with one or more of $-OH$, $-SH$, $-C(O)H$, $-COOH$, halogen, $-NR^2R^2$, $-C_{1-5}$ thioether or $-C_{1-5}$ alkoxy,

wherein at least two of $R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$ are not hydrogen;

Z is $-C(=W)NR^2R^3$ or $-C(=O)R^3$;

Y is $S(O)_2$;

each W is independently O;

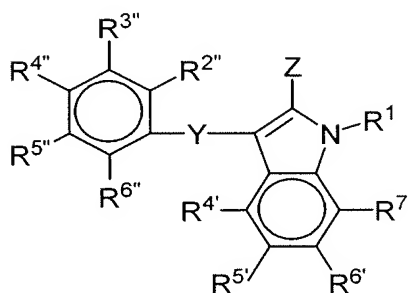
each R^2 is independently hydrogen or C_{1-3} alkyl;

each R^3 is independently C_{1-5} alkyl, C_{1-5} alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of $C(O)NR^2R^2$, $-NR^2R^2$, $-(CH_2)_mC(O)NR^2R^2$, $-(CH_2)_mC(=W)-NH(CH_2)_p$ -amino acid);

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is 1, 2, 3, 4 or 5.

Claim 41 (currently amended): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

R^1 is hydrogen;

$R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$ are each independently H or halo, wherein at least two of $R^{4'}$, $R^{5'}$, $R^{6'}$ or $R^{7'}$ are not hydrogen;

$R^{2''}$, $R^{3''}$, $R^{4''}$, $R^{5''}$ and $R^{6''}$ are each independently H or $-C_{1-5}$ alkyl or alkenyl optionally substituted with one or more of $-OH$, $-SH$, $-C(O)H$, $-COOH$, halogen, $-NR^2R^2$, $-C_{1-5}$ thioether or $-C_{1-5}$ alkoxy,

Z is $-C(=W)NR^2R^3$;

Y is $S(O)_2$;

each W is independently O or S;

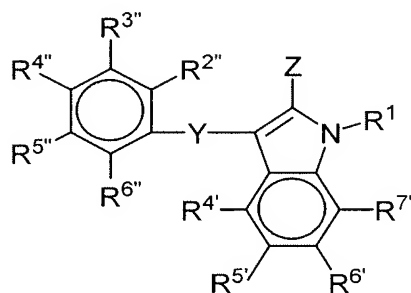
each R^2 is independently hydrogen or C_{1-3} alkyl;

each R^3 is independently C_{1-5} alkyl, C_{1-5} alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of $C(O)NR^2R^2$, $-NR^2R^2$, $-(CH_2)_mC(O)NR^2R^2$, $-(CH_2)_mC(=W)-NH(CH_2)_p$ -amino acid);

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is 1, 2, 3, 4 or 5.

Claim 42 (previously presented): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

R^1 is hydrogen;

$R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$ are each independently H or halo;

$R^{2''}$, $R^{3''}$, $R^{4''}$, $R^{5''}$ and $R^{6''}$ are each independently H or $-C_{1-5}$ alkyl or alkenyl optionally substituted with one or more of $-OH$, $-SH$, $-C(O)H$, $-COOH$, halogen, $-NR^2R^2$, $-C_{1-5}$ thioether or $-C_{1-5}$ alkoxy,

wherein at least two of $R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$ are not hydrogen;

Z is $-C(=W)NR^2R^3$;

Y is $S(O)_2$;

each W is independently O;

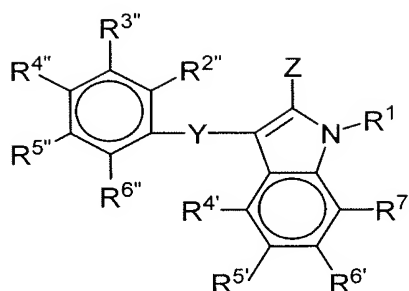
each R^2 is independently hydrogen or C_{1-3} alkyl;

each R^3 is independently C_{1-5} alkyl, C_{1-5} alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of $C(O)NR^2R^2$, $-NR^2R^2$, $-(CH_2)_mC(O)NR^2R^2$, $-(CH_2)_mC(=W)-NH(CH_2)_p$ -amino acid);

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is 1, 2, 3, 4 or 5.

Claim 43 (previously presented): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

R^1 is hydrogen;

$R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$ are each independently H or halo;

$R^{2''}$, $R^{3''}$, $R^{4''}$, $R^{5''}$ and $R^{6''}$ are each independently H; halo; $-\text{NO}_2$; $-\text{CN}$; $-\text{OR}^2$; $-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$; $-\text{NHCO-C}_{1-3}\text{alkyl}$; oxime, hydrazine, $-\text{C}_{1-5}\text{ alkyl}$ or $-\text{C}_{1-5}\text{ alkenyl}$ optionally substituted with one or more of $-\text{OH}$, $-\text{SH}$, $-\text{C(O)H}$, $-\text{COOH}$, halogen, $-\text{NR}^2\text{R}^2$, $-\text{C}_{1-5}\text{ thioether}$ or $-\text{C}_{1-5}\text{ alkoxy}$,

wherein at least two of $R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$ are not hydrogen;

Z is $-\text{C(=O)R}^3$;

Y is S(O)_2 ;

each W is independently O;

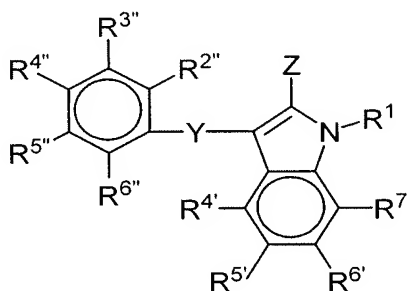
each R^2 is independently hydrogen or $\text{C}_{1-3}\text{ alkyl}$;

each R^3 is independently $\text{C}_{1-5}\text{ alkyl}$, $\text{C}_{1-5}\text{ alkenyl}$, aryl or heterocycle unsubstituted or substituted with one or more of $\text{C(O)NR}^2\text{R}^2$, $-\text{NR}^2\text{R}^2$, $-(\text{CH}_2)_m\text{C(O)NR}^2\text{R}^2$, $-(\text{CH}_2)_m\text{C(=W)-NH(CH}_2)_p\text{-amino acid}$);

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is 1, 2, 3, 4 or 5.

Claim 44 (currently amended): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

R^1 is hydrogen;

$R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$ are independently H or halo, wherein at least two of $R^{4'}$, $R^{5'}$, $R^{6'}$ or $R^{7'}$ are not hydrogen;

$R^{2''}$, $R^{3''}$, $R^{4''}$, $R^{5''}$ and $R^{6''}$ are each independently H; halo; $-\text{NO}_2$; $-\text{CN}$; $-\text{OR}^2$; $-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$; $-\text{NHCO-C}_{1-3}\text{alkyl}$; oxime, hydrazine, $-\text{C}_{1-5}$ alkyl or alkenyl optionally substituted with one or more of $-\text{OH}$, $-\text{SH}$, $-\text{C}(\text{O})\text{H}$, $-\text{COOH}$, halogen, $-\text{NR}^2\text{R}^2$, $-\text{C}_{1-5}$ thioether or $-\text{C}_{1-5}$ alkoxy,

Z is $-\text{C}(=\text{O})\text{R}^3$;

Y is $\text{S}(\text{O})_2$;

each W is independently O;

each R^2 is independently hydrogen or C_{1-3} alkyl; and

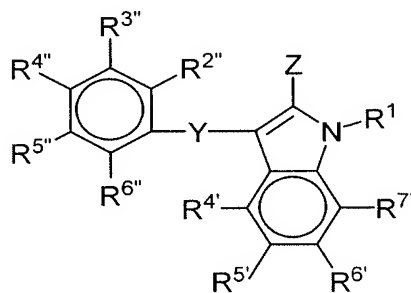
each R^3 is independently C_{1-5} alkyl, C_{1-5} alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of $\text{C}(\text{O})\text{NR}^2\text{R}^2$, $-\text{NR}^2\text{R}^2$, $-(\text{CH}_2)_m\text{C}(\text{O})\text{NR}^2\text{R}^2$, $-(\text{CH}_2)_m\text{C}(=\text{W})-\text{NH}(\text{CH}_2)_p\text{-amino acid}$;

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is 1, 2, 3, 4 or 5.

Claim 45 (previously presented): The method of any one of claims 19 or 24 wherein R^1 is hydrogen.

Claim 46 (currently amended): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

R^1 is hydrogen;

$\text{R}^{4'}$, $\text{R}^{5'}$, $\text{R}^{6'}$, $\text{R}^{7'}$ are each independently H or halo, wherein at least two of $\text{R}^{4'}$, $\text{R}^{5'}$, $\text{R}^{6'}$ or $\text{R}^{7'}$ are not hydrogen;

$R^{2''}$, $R^{3''}$, $R^{4''}$, $R^{5''}$ and $R^{6''}$ are each independently H or $-C_{1-5}$ alkyl or alkenyl optionally substituted with one or more of $-OH$, $-SH$, $-C(O)H$, $-COOH$, halogen, $-NR^2R^2$, $-C_{1-5}$ thioether or $-C_{1-5}$ alkoxy,

Z is $-C(=W)NR^2R^3$;

Y is $S(O)_2$;

each W is independently O;

each R^2 is independently hydrogen or C_{1-3} alkyl; and

each R^3 is independently C_{1-5} alkyl, C_{1-5} alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of $C(O)NR^2R^2$, $-NR^2R^2$, $-(CH_2)_mC(O)NR^2R^2$, $-(CH_2)_mC(=W)-NH(CH_2)_p$ -amino acid);
each p is independently 0, 1, 2, 3, 4 or 5; and
each m is 1, 2, 3, 4 or 5.

Claims 47-48 (cancelled)

Claim 49 (previously presented): The method of any one of claims 19 or 24 wherein Z is $-C(=O)NH_2$; $-C(=W)-NH_2$; $-C(=O)NHR^2$; $-C(=W)NHR^2$; $-C(=O)NR^2R^3$; $-C(=W)NR^2R^3$; $-C(=W)NH(CH_2)_p$ -(amino acid); $-C(=O)R^3$; $-C(=O)OR^3$; $-C(=O)OH$; $-C(=W)OH$; $-C(=O)OR^2$; $-C(=W)-OR^2$.

Claim 50 (previously presented): The method of any one of claims 19 or 24 wherein Z is $-C(=O)NH_2$; $-C(=O)NHR^2$ or $-C(=O)NR^2R^3$.

Claim 51 (previously presented): The method of any one of claims 19 or 24 wherein Y is SO_2 .

Claim 52 (previously presented): The method of any one of claims 19 or 24 wherein $R^{4'}$, $R^{5'}$, $R^{6'}$ and $R^{7'}$ are each independently H or halo.

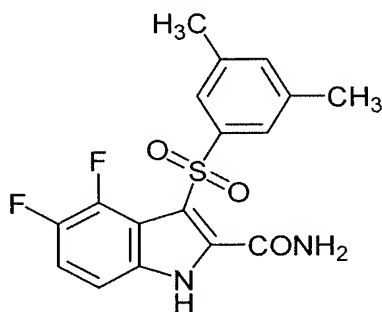
Claim 53 (previously presented): The method of any one of claims 19 or 24 wherein at least two of $R^{4'}$, $R^{5'}$, $R^{6'}$, $R^{7'}$ are not hydrogen.

Claim 54 (previously presented): The method of any one of claims 19 or 24 wherein $R^{2''}$, $R^{3''}$, $R^{4''}$, $R^{5''}$ and $R^{6''}$ are each independently optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl.

Claim 55 (previously presented): The method of any one of claims 19 or 24 wherein $R^{2''}$, $R^{3''}$, $R^{4''}$, $R^{5''}$ and $R^{6''}$ are each independently unsubstituted unbranched alkyl.

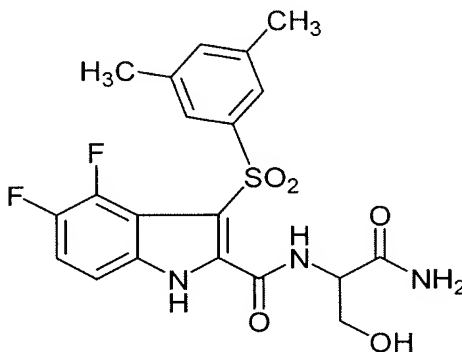
Claim 56 (previously presented): The method of any one of claims 19 or 24 wherein R^1 is hydrogen.

Claim 57 (previously presented): The method of any one of claims 19 or 24 for the treatment of an HIV-infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound wherein the compound is a compound of the formula



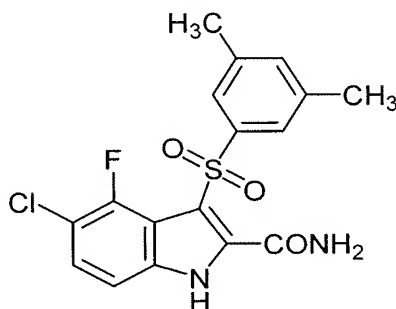
or a pharmaceutically acceptable salt thereof.

Claim 58 (previously presented): A method for the treatment of an HIV-infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of the formula



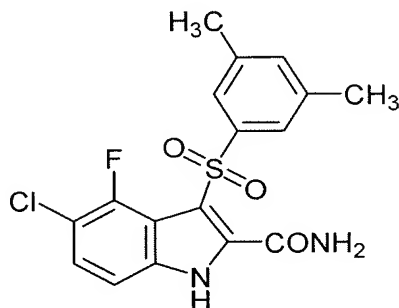
or a pharmaceutically acceptable salt thereof.

Claim 59 (previously presented): A method for the treatment of an HIV-infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of the formula



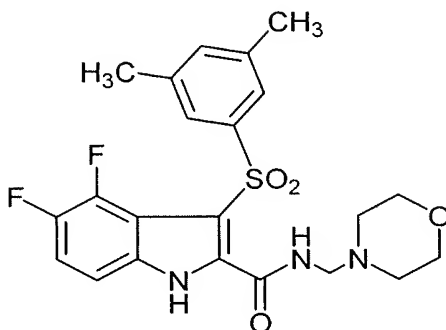
or a pharmaceutically acceptable salt thereof.

Claim 60 (previously presented): A method for the treatment of an HIV-infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of the formula



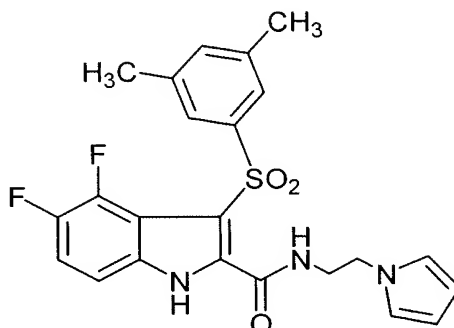
or a pharmaceutically acceptable salt thereof.

Claim 61 (previously presented): A method for the treatment of an HIV-infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of the formula



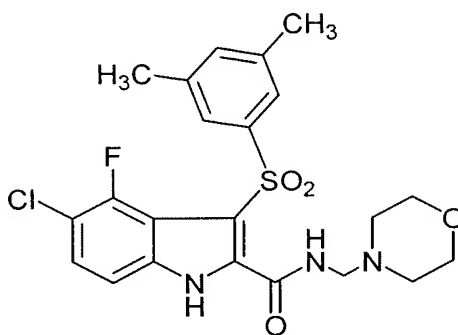
or a pharmaceutically acceptable salt thereof.

Claim 62 (previously presented): A method for the treatment of an HIV-infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of the formula



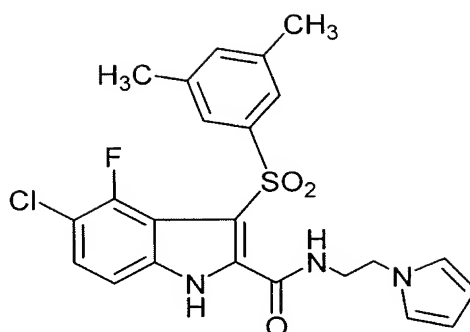
or a pharmaceutically acceptable salt thereof.

Claim 63 (previously presented): A method for the treatment of an HIV-infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of the formula



or a pharmaceutically acceptable salt thereof.

Claim 64 (previously presented): A method for the treatment of an HIV-infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of the formula



or a pharmaceutically acceptable salt thereof.

Claim 65 (previously presented): The method of any one of claims 57-64, wherein the HIV is resistant to one or more reverse transcriptase inhibitor(s), in combination and/or alternation with one or more other anti-HIV agent, optionally in a pharmaceutically acceptable carrier or diluent.